

## REDUCE, REUSE AND RECYCLE: RECENT INITIATIVES IN THE UK

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FIGURE 1 SHOWS a symbol and slogan that is increasingly recognised by UK consumers. This 'Mobius loop' symbol is made up of three green arrows that touch tip to tail in a triangle. Its purpose is to inform the purchaser of a product that the packaging can be recycled. The well-known slogan 'Reduce, Reuse, Recycle' prescribes three strategies for reducing the environmental costs associated with waste materials:

- Reduce – not producing waste in the first place
- Reuse – waste materials that could be reused without a great deal of reprocessing
- Recycle – waste that can be reprocessed into new products.



Figure 1: The 'Reduce, Reuse, Recycle' symbol

### What is waste and why does it matter?

Waste, or rubbish, is what people throw away because they no longer need it or want it. Almost everything we do creates waste and as a society we are currently producing

more waste than ever before (Figure 2). For example, each individual in the UK typically throws away seven times their own body weight (about 500 kg) in waste each year and in total the UK produces more than 434 million tonnes of waste each year – enough to fill dustbins from the UK to the moon! Have you ever thought about how much waste you and your family generate each week or why we need to stop throwing so much of it away?

Studies have shown that there is a strong relationship between the amount of waste produced and GDP (gross domestic product). That is, the wealthier the country, the more rubbish we generate. As the UK has a high GDP we generate a lot of waste and, because of our current consumer-driven lifestyle, the volume of this waste is growing by around 3% year after year. As a society the costs of producing all of this waste include the direct costs of the waste disposal itself, as well as the damage to the environment caused by the distribution and ultimate disposal of these products. For example, 80% of our household waste is sent to landfill sites, which creates noise and air pollution, produces greenhouse gases, can contaminate the local water table, and attracts pests like rats and seagulls. Furthermore, the vast majority of natural resources that we use in manufacturing products which we then throw away, sometimes a very short time later, is not **sustainable** – in other words, it cannot continue indefinitely

- Every year UK households throw away the equivalent of 3½ million full double-decker buses, a queue of which would stretch from London to Sydney (Australia) and back.
- On average, every family in the UK uses around 330 glass bottles and jars each year.
- The UK uses an estimated 500 million plastic bags each week. This is equivalent to over 290 plastic bags per person in the UK each year.
- About one-fifth of the contents of household dustbins consists of paper and card. This is equivalent to over 4 kg of waste paper per household in the UK each week.
- On average each person produces 4 times as much packaging waste as their luggage allowance on a jumbo jet.
- Babies' nappies make up about 2% of the average household dustbin. This is the equivalent to the weight of nearly 70,000 double-decker buses each year. If lined up front to end, the buses would stretch from London to Edinburgh.

Figure 2: Selected facts about UK waste generation

Source: [www.wasteonline.org.uk](http://www.wasteonline.org.uk)

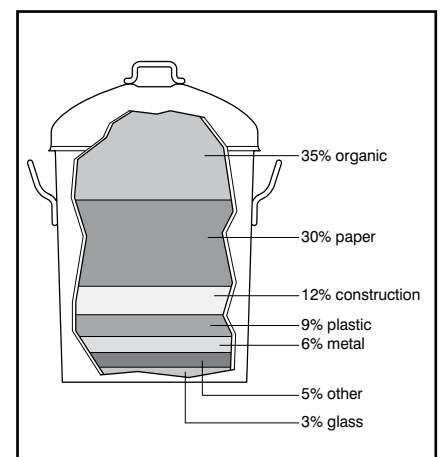


Figure 3: Average waste contents of a household bin

and will not leave resources for future generations to use.

Figure 3 shows a typical household bin full of waste. Many of the contents can be recycled and should be disposed of separately rather than being sent to landfill.

## The 'waste hierarchy' approach

The best way of dealing with our waste is not to produce as much of it in the first place! After that we need to think about how we can use fewer resources by reducing the amount of waste we produce, or by reusing the materials again. For example, glass milk bottles are on average reused 20 times, and towelling nappies can be reused over and over again, costing much less than buying disposables repeatedly. If this is not possible,

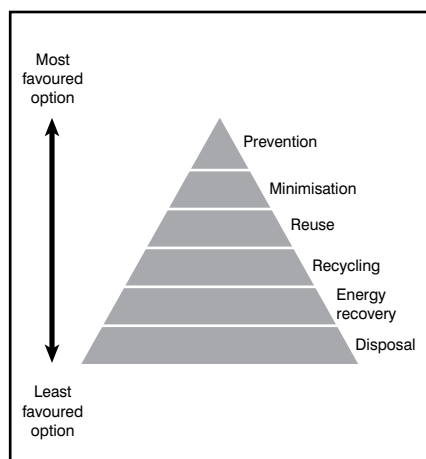


Figure 4: The waste hierarchy model

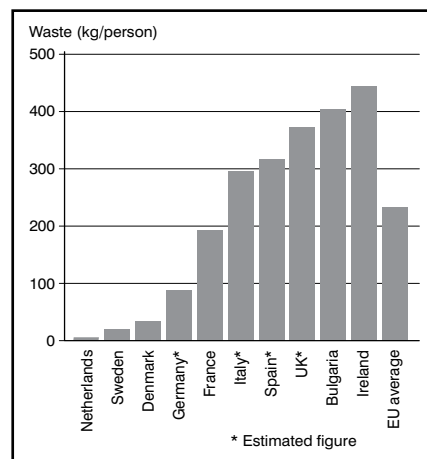


Figure 5: Landfill waste in selected EU countries, 2005

Source: Eurostat

however, we need to think of our waste as a 'resource' and investigate if there is an option to recycling items to make them last for longer. Waste glass, paper and scrap metal have all been recycled for many years. It makes economic and environmental sense to do so, as it conserves energy and raw materials and lessens the negative effects of disposal.

Figure 4 shows the 'waste hierarchy' approach to managing waste, first introduced in the European Union's Waste Framework Directive of 1975, and incorporated into the UK government's policies since the early 1990s.

The waste hierarchy classifies options for managing waste into a **hierarchy**, or order of importance, according to their desirability based on environmental impact. The model is designed to be used as a framework for dealing with all of the different types of waste we produce at local, regional and national levels.

The problem we have today in the UK is that most of our waste is still being dealt with towards the bottom end of the hierarchy, and this is unsustainable as we are running out of landfill options. The UK is one of the

worst offenders in Europe for dumping waste in landfill sites (Figure 5). Current projections indicate that the UK may run out of available landfill sites by 2016 if current rates of waste disposal continue. Figure 6 shows that between 1996/97 and 2005/06, household waste generated per person increased by 9% to an average of 512 kg. Although the proportion of waste collected for recycling or composting has increased from 7% to 26% over this period, the vast majority of our waste still gets sent to landfill sites.

## What is being done?

The European Union has set targets for all member countries on a wide range of waste management issues. The UK targets to reduce landfill are:

- By 2013 to reduce **biodegradable municipal waste** to 50% of that produced in 1995. (This is known as BMW – not to be confused with the German car manufacturers!)
- By 2020 to reduce landfilled BMW, to 35% of that produced in 1995.

Some regions are already meeting their targets and making progress. For example, a total of 1.29 million tonnes of BMW was sent to landfill in Scotland in 2008, which is already below the 1.32 million tonnes limit set for Scotland for 2009/10 by the European Union under the

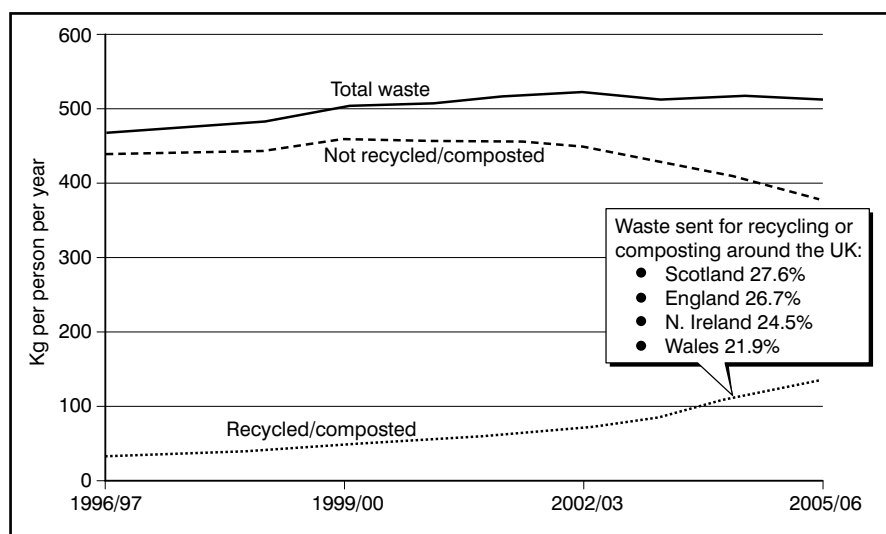


Figure 6: Household waste and recycling in the UK

Source: DEFRA

Landfill Allowance Scheme. Your local council, in partnership with other regional councils, will have produced its own plan for improving the waste management in your area through recycling and composting initiatives. The following two case studies outline some examples of local and regional council initiatives from around the UK for reducing the volume of waste sent to landfill.

## Case Studies

### West Dunbartonshire Council, Scotland

West Dunbartonshire Council has made every April its 'Waste Prevention Month'. Councillor William Hendrie (spokesperson for Housing, Environmental and Economic Development) said: 'There is the need for waste prevention awareness-raising to encourage people to think beyond recycling and to think of local everyday actions that could reduce waste arising in the first instance. The Council is promoting ten simple actions which, if we all adopt, can reduce the waste that we collect and therefore end up at landfill.' This 10-point plan encourages residents to:

- 1 Use more and waste less food.
- 2 Reduce packaging by buying loose or unpackaged food or buying in bulk.
- 3 Reduce junk mail by writing to the sender or registering with the Mailing Preference Society ([www.mpsonline.org.uk](http://www.mpsonline.org.uk)).
- 4 Reuse garden and kitchen waste by home composting.
- 5 Use real nappies rather than disposables.
- 6 Support local charity shops and second-hand initiatives for items like clothing, books, CD/DVDs and furniture.
- 7 Look out for sharing and hire schemes online or from libraries.
- 8 Use rechargeable and reusable items like batteries and razors and look out for low-energy and longer-life products.

- 9 Reduce use of plastic carrier bags by reusing them or buying bags for life.
- 10 Reuse waste, for example scrap paper can be used as notepads, glass jars can be used to store food.

All of the actions being promoted are designed to raise awareness and encourage individuals to make lifestyle changes by producing less waste, recycling materials, or reusing waste products for another purpose.

### Staffordshire Moorlands District Council, England

'Recycle for Staffordshire Moorlands kerbside recycling scheme' was named as the Best Local Initiative at the 2008 National Recycling Awards. An enhanced recycling, composting and waste collection service was introduced in 2007, which has seen recycling rates amongst residents increase to over 60% in under one year.

Households were each provided with a bin for mixed recyclables (including plastics), another bin for organic material (including cardboard and food waste), a set of bags for recycling paper and textiles, and a final third bin for any remaining general waste. Staffordshire Moorlands District Council operates an alternate-week collection service for these items. It also created a network of Neighbourhood Recycling Centres for residents to recycle more of their waste, and a variety of alternative waste collection services is offered for bulky items like furniture. The Recycle for Staffordshire website provides details on promotions, recycling and waste collections across the county, keeping residents informed. Finally, as part of the annual national recycle week, held at the end of June each year in the UK, local residents are encouraged to make an online waste reduction pledge ([www.recyclenow.com/](http://www.recyclenow.com/)).

Arthur Forrester, deputy leader of the Council, said: 'There's always more we can do to make the most of our existing habits, by doing something new or more of the same. The range of materials we can recycle locally has increased, so it's never been more convenient to be eco-conscious in our living – all year round!'

### Summary

These are just two UK examples of local and regional initiatives designed to improve waste management by either raising awareness of the issue or by providing a new improved public service. Changes in the way we buy, use and dispose of products are necessary if we are to reduce the environmental impact of our everyday lives and move towards becoming a zero waste society.

# Activities

1 Refer to an atlas and study Figure 2.

(a) Calculate how far the trail of babies' nappies in the UK would stretch, to the nearest 50 km.

(b) Calculate how great a distance total UK household waste would stretch, to the nearest 1,000 km.

2 Study Figures 5 and 7.

(a) What does the term 'gross domestic product' (GDP) refer to?

(b) What do you think is the likely relationship between the GDP of a country and the amount of waste it produces?

(c) Using graph paper, produce a scattergraph to test the likely relationship between GDP and the amount of waste produced for selected EU countries.

Does your graph support the stated general relationship from Activity 2 (b)? Suggest possible reasons for the relationship shown on your graph.

3 Study the text and Figure 3.

(a) List the three main problems associated with waste.

(b) Why is our current use of natural resources unsustainable?

(c) Construct a divided bar chart to display the average waste contents of a household bin. Use appropriate shading to highlight the proportion of the contents which you think could be recycled.

4 Working in small groups, discuss the individual actions that you could take to reduce the amount of waste that you produce at home. List your suggestions to feed back to your class.

5 Study the two case studies in the text. Which of the two regional approaches do you think will be the most effective at reducing the amount of waste being generated? Write a short paragraph evaluating the

Selected EU countries	GDP per capita (US\$)
Netherlands	52,019
Sweden	52,790
Denmark	62,626
Germany	44,660
France	46,016
Italy	38,996
Spain	35,331
UK	43,785
Bulgaria	6,857
Ireland	61,810

Figure 7: GDP per capita figures for selected EU countries

Source: IMF 2008

strengths and weaknesses of each approach.

6 Log onto the internet and work in pairs for this ICT research task (see the websites below and others in this unit).

(a) Produce a list of 10 items that can be recycled in your local area. For each item state the nearest local recycling facility for that product. Try the recycling search facility at [www.recycle-more.co.uk/](http://www.recycle-more.co.uk/).

(b) Research the dates and themes of this year's 'Recycle Week' or 'Compost Awareness Week'. Design a poster to promote this event in your school.

[www.recyclenow.com/](http://www.recyclenow.com/)  
[www.recycle-more.co.uk/](http://www.recycle-more.co.uk/)  
[www.wascot.org.uk/](http://www.wascot.org.uk/)  
[www.wrap.org.uk/](http://www.wrap.org.uk/)  
[www.greenchoices.org.uk](http://www.greenchoices.org.uk/)  
[www.mpsonline.org.uk](http://www.mpsonline.org.uk)

## Extension exercises

7 Working in small groups, develop an action plan for your school to 'Reduce, Reuse and Recycle' its waste. How will you raise awareness and make changes in an environmentally-friendly way? Develop a short presentation which can be made to the class or perhaps in an assembly.

8 Construct a chart to display the type and amount of waste that your family throws out over the next week. You should record figures like the number of:

- glass bottles/jars
- cans
- cardboard boxes
- newspapers/magazines
- plastic bottles.

If possible weigh the remainder of your rubbish. Make a note of what was recycled (noting the method used) or composted from your family's total waste.